PORTLAND-CEMENT CONCRETE PAVEMENT

The sixth of a series of ten articles upon the paving situation in Oregon

In the first five articles we have gone somewhat thoroughly into the subject of bituminous pavements. So in this article we will take up portland-cement concrete pavements.

The first concrete pavement in the United States was laid at Bellefontaine, Ohio, in 1893. This pavement has been in constant use for almost a quarter of a century, and is still in good condition; yet maintenance charges have been practically nothing over this long period of time. The success that has attended our first resort to concrete as a road material has caused much attention to be given to portland-cement concrete roads. So that at the present time there is a far greater mileage of concrete than of bituminous roadways being laid in this country. Moreover, the constantly increasing demand shows that concrete roads have given good service, and won adherents wherever they have been put in properly. But of course concrete pavement has its disadvantages as well as its advantages.

Portland-cement concrete roads consist of crushed rock or gravel, sand and portland cement. The cement, of course, acts as the binder to tie the crushed rock, or gravel, and the sand together. As concrete is composed entirely of stable inorganic ingredients, it will not deteriorate under the elements as does a bituminous pavement. Moreover, the portland cement acts as a real binder to hold the aggregate together rather than as a waterproofing material to fill up the interstices of the pavement.

Hassam; What it is and its Advantages.

Concrete pavements, just as in the case of bituminous pavements, are divided into patented and unpatented types. Hassam is the name of the patented concrete pavement that has been used most extensively in Oregon. The difference between Hassam and ordinary concrete pavement is fundamental. Ordinary concrete pavement is mixed in a rotary mixer, and then deposited upon the roadway. After being spread evenly over the surface that is to be paved, it is tamped by hand, the tamping being, of course, to insure a dense concrete that will have a small percentage of voids in it. Hassam is put in entirely differently. First the rock, or macadam portion, of the pavement is put in place and spread to the crown contour desired in the finished roadway. Then a grouting, or batter, of portland cement, sand and water is poured over the crushed rock until all open spaces between the rock fragments have been filled. The working of the grouting into the pavement is aided by continually running a steam roller over the area of crushed rock that is being treated. For the rolling tends to shake or tamp the mixture, causing the batter or grout to settle better into the open spaces of the pavement.

The truth is that Hassam does have notable advantages over ordinary concrete pavement, although the makers of portland cement are reluctant to admit this, for Hassam does not require so much cement as does ordinary concrete pavement for the same strength of roadway. This is because the rolling results in a denser concrete than does the hand tamping of ordinary concrete pavement. As the concrete is denser, it is also stronger. Then again it is evident to the reader that it must be cheaper to tamp the concrete mixture by means of a machine than it is to do the tamping by hand, and, as only the grout has to be mixed, the mixing also must cost less. Luckily the Hassam patents expire only a few years from now.

Both Hassam and ordinary portland-cement concrete are laid six inches thick according to city of Portland specifications, but in parts of the city where traffic is light Hassam "B" pavement, which is five instead of six inches thick, is permitted. In the city of Portland concrete pavement is mixed in the proportion of one part portland cement by volume to two parts sand and four parts crushed rock. On the Multnomah County road-work the proportion used is that which has been decided upon in Wayne County, Michigan, where in the vicinity of Detroit more concrete pavement has been laid during the last six years than in any other area of equal size in the United States. The Wayne County mixture consists of one part portland cement by volume to one and a half parts sand and three parts gravel, or crushed rock.

The Bellefontaine pavement laid in 1893 was put down in two courses. The base, which was four inches thick, consisted of one part portland cement to four parts sand and gravel, and the wearing surface, which was two inches thick, consisted of one part portland cement to one part sand. This, as can be seen, is a mixture rich in portland cement. Since 1893 various grades of mixtures have been tried. Most of these concrete pavements have proved successful, but there have been some failures. Investigation has shown that the failures have been due either to the use of poor materials, or, as was more generally the case, because a mixture too low in portland cement was tried. But in general it can be said that whenever a 1:2:4, or richer, mixture has been used satisfactory results have been obtained. Experience has also shown that it costs more to lay pavement in two courses than in one, and that the one-course pavement gives as good service as does a two-course roadway. Therefore present practice favors one-course pavement almost universally.

Important Faults in Cement Concrete and Ways of Overcoming Them.

Only two faults of any great importance have cropped up when the concrete has been mixed in proper proportions and of good materials. These are cracks in the pavement, and uneven wear of the concrete surface. Experience in Wayne county and elsewhere has shown that if expansion-joints are placed at regular intervals, and these joints are properly armored and protected from the jar of passing vehicles, large cracks can be prevented from forming, while the small cracks that do appear have little effect upon the wearing quality and durability of the pavement.

Unevenness of wear is handled in two different ways. These may be designated as the Ann Arbor and the Wayne County methods. Ann Arbor met the condition of uneven wear that appeared in its concrete streets by coating the concrete at time of laying with bituminous surface from one-quarter to three-eights of an inch thick. This bituminous coating takes the wear and tear of the traffic and also deadens the sound, as well as makes the pavement easier on the feet of horses and less annoying to the eyes of people passing along it. The bituminous coat also tends to protect the concrete from uneven heating or cooling, so that there is

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Primary Election Drawing Near

One week from next Friday, May 19, the registered voters will be called upon to select their party candidates.

Since those registered as Republicans are so much in the majority, interest naturally centers in the Republican candidates, as the nomination is in most cases equivalent to election.

Following is a portion of the ticket in which the readers of the Labor Press should be particularly interested:

Representative in Congress.

C. N. McArthur, incumbent, E. V. Littlefield and A. W. Lafferty.

Secretary of State.

Ben Olcott, incumbent; Charles B. Moores.

Public Service Commissioner—Western District.

Fred G. Buchtel, Thomas K. Campbell.

Judge of the Circuit Court.

Department No. 1—J. P. Kavanaugh, incumbent; Wilson T. Hume, Robert C. Wright.

Department No. 3—W. M. Davis, J. E. Magers, A. G. Thompson, Robert Tucker. Mr. Davis is endorsed by organized labor. Mr. Tucker is said to be the candidate of the Employers' Association.

Department No. 5—Frank S. Grant, Fred L. Olson. This department is at present presided over by W. N. Gatens, Democrat, who is without opposition for the Democratic nomination.

District Attorney.

Walter H. Evans, incumbent; John C. McCue. This seems to be a contest between the "wets" and "drys" with McCue on the wet side and Evans on the dry side.

State Senator.

(Five to be nominated.)

F. M. Patten: Spanish-American war veteran. Physician and surgeon.

F. H. Ransom: Manager Eastern & Western Lumber Company.

Dan E. Powers: Lawyer. Formerly member of Outside Electrical Workers' Union.

F. O. Lehman: Chiropractic doctor. Offices in Abington building.

John C. Shillock: Lawyer. Spanish-American war veteran. Says he favors free text books and military training for public schols of state. Making very active campaign.

Robert S. Farrell: Commission merchant; member of 1915 Legislature (Senate). Did not favor labor legislation.

Conrad P. Olson: Lawyer. Member of 1915 Legislature (H. R.). Introduced H. B. No. 113, regulating the payment of wages and many other bills, among which was H. B. No. 19 providing method whereby electors may become candidates. Worked actively for the latter.

Gus C. Moser: Lawyer. Member of Senate, 1915. Carried water on both shoulders.

S. B. Huston: Lawyer. Member 1915 Legislature (H. R.). Is fair minded. Does not see labor's viewpoint. Frank in his opposition. Whole-hearted in support if given.

John Gill: Merchant. Member of 1915 Legislature (H. R.). Against labor legislation.

A. W. Orton: Lawyer. Spanish-American war veteran. Judging from platform, is running on record as soldier.

For State Representative.

(Twelve to be nominated.)

Oscar W. Horne: Bricklayer. Union man. Endorsed by organized labor. Member of 1915 Legislature and made splendid record.

Horace G. Parsons: Cigarmaker. Member firm Fitzgerald & Parsons, cigar manufacturers. Union man. Endorsed by organized labor.

Elmer E. Pettingill: Musician. President Musicians' Union. Endorsed by organized labor.

Fred W. Wagner: Formerly president Tile Setters' Union. Endorsed by Building Trades Council and recommended by Central Labor Council. Now connected with the Portland Tile Works.

Plowden Stott: Lawyer. Generally recognized as a square shooter. Was member of 1915 Legislature and is worthy of re-election.

Stephen A. Matthieu: Druggist. Is opposed to any change in prohibition law that will permit druggists to sell liquor. Says he understands problems of labor and is in sympathy with general legislative program.

O. Laurgaard: Consulting engineer. Had charge of Tumalo irrigation project. Had no labor troubles. Never been in politics before. Interested especially in irrigation and rural credits.

Harry L. Idleman: Real estate dealer. Author of present lien law. Says he favors change in law so that Legislature will meet every four years instead of two years, and less supervision of private business by public officials.

D. C. Lewis: Lawyer. Member 1915 Legislature and generally voted right.

E. J. Goode: Chiropractic doctor.

John F. Cahalin: Lawyer. Formerly deputy city attorney. In his statement he pledges himself to "favor measures advancing the cause of labor."

Albert E. Gebhardt: Lawyer. Member of Grange. Ballot slogan, "Oregon first in commercial, industrial and education development. Economy consistent with progress." Says he understands the problems of labor and is in sympathy with legislative program.

John R. Latourete: Lawyer. Member 1913 Legislature.

Franklin F. Korell: Lawyer.

Harold V. Newlin: Lawyer.

Virgil L. Clark: Lawyer. No platform.

Fred J. Meindl: Lawyer.

Norman S. Richards: Lawyer.

Lionel C. Mackay: Lawyer.

Carlton E. Spencer: Lawyer. Son-in-law of W. D. Fenton, attorney for Southern Pacific.

Joseph H. Page: Lawyer. Was deputy district attorney under George Cameron. Favors a "business-like, strictly economical program for the Legislature."

Cliff R. Meloney: Lawyer. Been active in politics for some time. One of promoters of Lincoln Club.

Fred R. Salway: Law librarian, county court house. Advocates change in method of selecting jurors.

Fred J. Brady: Old-time politician.

K. K. Kubli: Proprietor job printing office. One time member of city council. Runs "open shop.

John M. Mann: Proprietor Ivy Press job printing office. Runs "open shop."

Hamilton F. Corbett: Teller First National Bank.

Paul C. Bates: Member insurance firm of McCarger, Bates & Lively. Make specialty of casualty insurance. Active opponent of present compensation law. Actively supported by the Spectator, official organ of Employers' Association. Praised by that paper because he does not put union label on campaign literature. Swat him.

A. C. Callan: Real estate dealer. Assistant secretary Metropolitan Laundry Company. Active in opposition to rulings of Industrial Welfare Commission. Swat him.

George T. Willett: In employ of Northern Pacific Railroad Company for 30 years up to last June, when he resigned as city ticket agent.

Herbert Gordon: Abstractor. Running on strictly business platform.

L. G. Carpenter: Ex-city detective. Member 1913 Legislature.

R. L. Macleay: Business man. Has no platform. Says he favors the business and industrial development of the state. Residence Arlington Club.

Percy E. Arlett: Business man. Running on strictly business platform.

Joseph A. Stutt: Member Butchers' Union. Formerly member of firm of Stutt & Howland, saloon-keepers at Sixth and Washington.

L. P. Morrow: Carpenter.

Lot P. Keeler: Spanish-American war veteran. Member Carpenters' Local No. 226 and endorsed by that body. Running on a business platform. Name appears among those boosting Pat McArthur. His ballot slogan is "Peace, progress, prosperity, preparedness and, if necessary, the punch."

County Clerk.

John B. Coffey, incumbent; Joseph Beveridge. Mr. Beveridge resigned not long ago from the executive board of the Employers' Association. He is a close association of A. A. Bailey. Nuf sed.

County Judge.

T. J. Cleeton, incumbent; George H. Tazwell. Mr. Tazwell was municipal judge during the Simon administration, having been appointed by Simon.

Sheriff.

T. M. Hurlburt, incumbent; R. L. Stevens.

County Assessor.

Henry E. Reed, incumbent; no opposition.

County Treasurer.

John H. Lewis, incumbent; no opposition.

County Commissioner.

W. L. Lightner, incumbent; C. P. Stayton, A. A. Muck, W. B. Steele. It is said that Muck is the candidate being backed by Rufus Holman, J. B. Yeon and Benson in an endeavor to beat Lightner.

County Surveyor.

R. C. Bonser, incumbent; E. A. Middlebrook.

County Coroner.

Dr. F. H. Dammasch, incumbent; Dr. Daniel Grant. Dr. Grant has the endorsement of several different local unions.

County School Superintendent.

E. S. McCormick, E. H. Whitney, W. C. Alderson and Miss Abbie Wright.

Constable.

Andy Weinberger, incumbent; M. W. Petersen, Andy Vaughn and Sanfield Macdonald. Mr. Petersen has been endorsed for this position by organized labor.

COMMENDS STAND ON TEXT BOOK QUESTION.

Gresham, Or., April 27, 1916.—Editor Oregon Labor Press, Portland, Oregon: Dear Sir.—I wish to congratulate you upon your stand for the state publication of text books for our public schools in the last issue of the Labor Press.

Every point you make is well taken. The states of Kansas and California have proved your contentions to be true.

In this connection, however, I hope that you will advocate through the columns of the Labor Press the state ownership of the text books as well as state publication thereof.

The great loss to the poor people—and they are the ones who have large families as a rule—is the loss caused by the continual expense of buying new books as their children pass from grade to grade, the books that are lost or misplaced during vacation time, and the ones left in the various school houses, never to be seen again by their rightful owners.

Then state ownership would eliminate the losses sustained under the present system by the "movers," who go from state to state and whose text books often become a total loss.

Yours for public schools that are free. ELMER S. McCORMICK.

BUILDING LABORERS, ATTENTION.

There will be a special meeting of the union next Tuesday evening, 8 o'clock, Labor Temple.

It is highly important that each and every member of the local be present, as there is some important business to come before the meeting.

Be sure and come yourself and pass the word along.

HAYNES AND DIXIE BREAD STILL UNFAIR.

The Twentieth Century Bakery has gone into the hands of a receiver after four months' boycott by the Bakers' Union and Central Labor Council, which again goes to prove that the bread-eating public prefers bread made by firms where conditions are fair to the workers, and disapproves of the sweat shop methods such as those generally used by unfair firms.

By working in harmony and with the further support of organized labor and the general public, we shall soon be able to bring to terms the only unfair bakery concern left in Portland—the Vegetarian Bakery, making Haynes' Dixie bread and buns and all his products generally known under the name of Haynes.

Wherever these products are seen it would be well for the organized worker and the fair thinker to leave them alone, as small wages and long hours do not increase the health and buying capacity of the worker.

The Bakers' Union has gained for its members an increase of $1 per week for each journeyman and has signed up agreements for one year from May 1, 1916, to May 1, 1917, with all bakeries in the city where only union bakers are employed.

We therefore ask the public, organized and unorganized, to eat only union-made bread. Leave alone Haynes' products, known as Dixie bread and Haynes' bread, pies and cakes.

R. KROLL,
Secretary 114, B. C. W. I. U. of A.

CONFERENCE OF SOCIAL AGENCIES.

The Oregon State Conference of Social Agencies will hold its annual meeting at Reed College on May 12, 13 and 14. The topics for discussion this year are: "The Segregation of the Socially Inefficient," "The Revision of the Oregon Criminal Code," "Proposed Social Legislation in Oregon," and "Health Insurance." The discussion of the first-named topic will deal with the dangers to society and the remedies needed because of the socially inefficient—the great mass of borderline cases—as contrasted with the socially unfit—cripples, insane persons, idiots and criminals. Health insurance is now in force in most European countries and it is an issue in three states in the East. The need for a revision of the Oregon criminal code has long been felt.

Speakers from Washington, California, Idaho and Illinois will make addresses. Two exhibits of great interest will be shown, the Child Welfare Exhibit and a Reed College Municipal and Social Welfare Exhibit.

This conference will be the fourth annual social service conference to be held at Reed College. A conference on the conservation of human life was held in 1913, the "Portland 1915" conference in 1914, and last year was held the first meeting of the Oregon State Conference of Social Agencies.

UNION MAN CANDIDATE IN MARION COUNTY.

Ivan G. Martin, member of the Musicians' Union of Salem, is a candidate for State Representative from Marion county.

Mr. Martin is a native Oregonian, having been born in the state in 1881.

He is making an active campaign

on a progressive platform and promises if elected to give a good account of himself.

He is a man who is generally recognized as having the ability to cope with any situation which might arise and we hope that the voters of Marion county will send him to the Legislature with a handsome majority.

CIVIL SERVICE EMPLOYES TAKE NOTICE.

On Monday, May 8, Mr. Roy E. Peabody, chairman of the Laws and Legislative Committee of the Civil Service Employes of San Francisco, who was in Washington, D. C., for over a month, where he appeared in the interest of legislation of interest to Civil Service Employes, will be in attendance and will address the meeting of Civil Service Employes of this city.

This will be an open meeting and the regular order of business will be dispensed with and there will perhaps be other speakers who will have something to say that will be of interest to all Civil Service Employes.

CHURCH HANDLES TOWNSEND PRODUCTS.

There's a man by the name of Church, who runs a drug store on the croner of Broadway and union avenue who is very desirous of having every one become familiar with the fact that he handles White Clover ice cream, the product of the Townsend Creamery Company.

It is the duty of every newspaper to disseminate the news and we hasten to advise all our readers who happen to be patrons of this particular drug store as to the brand of ice cream handled there.

The proprietor of the place says that he don't care who knows that he handles the Townsend product and as we don't care, either, we wish to assist him to get the fact before the public.

A hint should be as good as a kick in the slats.

MR. MATTHIEU'S CARDS BEAR THE LABEL.

Last week we made a few remarks about the candidates who were having election cards printed that did not bear the label of the Allied Printing Trades Council.

Among those mentioned was S. A. Matthieu, druggist, who is running for State Representative.

From a more complete investigation, we are of the opinion that Mr. Matthieu had no intention to offend the members of organized labor by omitting the label. There were only a few of the cards without the label printed. Since giving the first order Mr. Matthieu has had about 50,000 cards printed, all of which bear the union label.

In conversation with a representative of the Labor Press, Mr. Matthieu said: "I have been in the drug business in a working man's community for the past 25 years and I think I know the value of organization for the working people. It is not my intention to knowingly do anything that will retard the progress of your organizations, because I believe they are a great benefit to the country.

"I entered the race for State Representative at the urgent request of the druggists of Portland who are opposed to any legislation amending the present prohibition laws so as to permit druggists to dispense liquors, or even carry them in stock, and if I am elected I will certainly oppose any such attempt.

"I will serve all the people to the best of my ability."

The writer has known Mr. Matthieu for many years and believes him to be an honest, straightforward, conscientious citizen who will do his best to be fair to all should he be elected.

TILLICUMS ENDORSE MORE CANDIDATES.

At the regular meeting of the Tillicum Club last Saturday night, the following additional candidates were endorsed:

Representative in Congres—E. V. Littlefield; State Legislature, O. Laurgaard, Joe Stutt, J. Cahalin, J. Latourette; State Senator, Dan Powers; County Commissioner, W. L. Lightner; Judge Circuit Court department No. 1, J. P. Kavanaugh; department No. 5, W. N. Gatens.

The club will give a dance on May 13 in ratification of endorsements.

SYRACUSE MACHINISTS STRIKE.

A refusal by automobile gear-making plants to better working conditions has resulted in a strike of several thousand machinists, Syracuse, N. Y.